

Letter from the Editor-in-Chief

Welcome to the second issue of volume 15 of the *Journal of the Brazilian Computer Society*. This issue includes three papers reporting research contributions in two distinct computer science areas.

The first paper, by Rafael Huff, Roberto Silveira da Rosa Jr., Luciana Porcher Nedel and Carla Maria Dal Sasso Freitas, is on Volume Rendering, and handles the issue of user interaction with volumetric data sets. They describe interactive tools for volume sculpting that enable users to inspect inner parts of a data volume, delimit and discard regions within it and build virtual structures that fit the data. Their tools rely on two interaction metaphors, namely virtual pointer and virtual hand. They report results from user experiments conducted to evaluate the sculpting tools operated with different interaction devices, and also to identify user preferences.

The two remaining papers are extended versions of selected contributions presented at GEOINFO 2008, the 10th *Brazilian Symposium on GeoInformatics*, held at Rio de Janeiro in December 2008.

The paper by Thiago Luís Lopes Siqueira, Cristina Dutra de Aguiar Ciferri, Valéria Cesário Times, Anjolina Grisi de Oliveira and Ricardo Rodrigues Ciferri addresses the problem of understanding how spatial data redundancy affects Spatial On-Line Analytical Processing (SOLAP) query performance over Geographic Data Warehouses. They

describe and discuss experimental evaluations conducted to compare the query response times of spatial roll-up and drill-down operations for different Geographic-Data Warehouse schemes. Motivated by the results obtained they conducted further investigations on alternative indexing approaches aimed at improving query performance in this context, also addressing the issue of how increase in data volume affects performance.

José Augusto Sapienza Ramos, Claudio Esperança and Esteban Walter Gonzales Clua are concerned with high-quality depiction of cartographic information on web-based map browsers. They introduce a client-server architecture capable of progressively transmitting vector maps in multiple levels-of-detail by employing polygonal line simplification, spatial data structures and a customized memory management algorithm. They also describe a multiplatform implementation of their solution that avoids external applications or plug-ins altogether, and present results of experiments aimed at evaluating both system performance and display quality.

Finally, I take the opportunity to encourage conference chairs and steering committees of conferences sponsored by the *Brazilian Computer Society* to consider recommending the best papers from their conferences for possible publication of extended versions at JBCS. Such initiative may disseminate to a broader audience high quality computer science research contributions reported in our conferences.

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